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HAYES SOLOWAY P.C. 3450 E. SUNRISE DRIVE, SUITE 140 TUCSON, AZ 85718			EXAMINER MAHMOUDZADEH, NIMA	
			ART UNIT 2609	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,141

Applicant(s)

KUNINOBU, HIROAKI

Examiner

Nirna Mahmoudzadeh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/06/2004 and 05/18/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 9 line 3, "equipments 15" should be changed to --equipments 12--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1- 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the term "a transmission signal" on line 9 and 11 and term "a received transmission signal" on line 15, seem to be pointed to the same signal. So, it should be consistently used the same term for the same signal in the claim. Claims 13, 20, and 27 have the same deficiency. Clarification is required.

Claims 2-12, 14-19, 21-26, 28 and 29 have the same deficiency because they are depended from defected claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 7, 11, 13, 14, 19, 20, 21, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyashita et al. (US Patent Application No. 2003/0091057)

Regarding claim 1, Miyashita et al. teach a data transfer system for transferring control information from a control terminal to a target through a data transmission network including at least one data transmission equipment working in a predetermined communication protocol, wherein

each of said at least one data transmission equipment (Fig. 1, 60) comprises:

a receiving section (Fig. 1, 60a) for receiving a transmission signal including control information from upstream (see page 3 paragraph [0046]);

a transmitting section (Fig. 1, 60f) for transmitting

a transmission signal including control information to downstream (see page 3 paragraph [0047]); and

a forwarding section (Fig. 1, 60) for forwarding control information included in a received transmission signal to the transmitting section without controlling the control information according to the predetermined communication protocol. (It is noted that

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extracted control data is stored in storage. When transmitter is ready to transmit, it will transmit data, see page 3 paragraph [0084]);

Regarding claim 2, Miyashita et al. teach the data transfer system according to claim 1, wherein the forwarding section comprises:

a data extractor (Fig. 1, 60b) for extracting the control information from the received transmission signal (see page 4, paragraph [0083], line 3. Also, see Fig.5, 104-107); and

a data inserter (Fig.5, 118 for inserting the extracted control information into a predetermined one of a first location and a second location of the transmission signal to be transmitted (it is noted that extracted data is inserted into the transmission data. See page 3 paragraph [0048] line 4. Also, see Fig.5, 114-117).

Regarding claim 7, Miyashita et al. the data transfer system according to claim 1, wherein the forwarding section further comprises:

a data extractor for extracting the control information from the received transmission signal (Fig. 5, 104-107);

a first data inserter for inserting the extracted control information into a first location of the transmission signal to be transmitted (Fig. 5, 114-117);

a second data inserter for inserting the extracted control information into a second location of the transmission signal to be transmitted (Fig. 5, 114-117); and a switch for forwarding the extracted control information to a selected one of the first and second data inserters depending on predetermined control information (See page 6, paragraph [0104]).

Regarding claim 11, Miyashita et al. inherently teach the data transfer system according to claim 1, wherein the data transmission network is composed of data transmission equipments working in the predetermined communication protocol because, all data transmission equipments work in a predetermine communication protocol.

Regarding claim 13, Miyashita et al. teach a data transmission apparatus in a data transfer system for transferring control information from a control terminal to a target through a data transmission network, wherein the data transmission apparatus (Fig.1, 60) works in a predetermined communication protocol, comprising:

a receiving section (Fig. 1,60a) for receiving a transmission signal including control information from upstream (see page 3 paragraph [0046]);

a transmitting section(Fig.1, 60f) for transmitting a transmission signal including control information to downstream (see page 3 paragraph [0047]); and

a forwarding section (Fig.1, 60) for forwarding control information included in a received transmission signal to the transmitting section without controlling the control

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information according to the predetermined communication protocol (It is noted that extracted control data is stored in storage, when transmitter is ready to transmit uses the stored control data. see page 3 paragraph [0084] and Fig.1).

Regarding claim 14, Miyashita et al. teach the data transmission apparatus according to claim 13, wherein the forwarding section comprises: a data extractor (Fig. 1, 60b) for extracting the control information from the received transmission signal (see page 4, paragraph [0083], line 3); and a data inserter (Fig. 5, 118) for inserting the extracted control information into a predetermined one of a first location and a second location of the transmission signal to be transmitted. (It is noted that extracted data inserted into the transmission data. See page 3 paragraph [0048] line 4).

Regarding claim 19, Miyashita et al. the data transfer apparatus according to claim 13, wherein the forwarding section further comprises:

a data extractor for extracting the control information from the received transmission signal (Fig. 5, 104-107);

a first data inserter for inserting the extracted control information into a first location of the transmission signal to be transmitted (Fig. 5, 114-117);

a second data inserter for inserting the extracted control information into a second location of the transmission signal to be transmitted (Fig. 5, 114-117); and

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a switch for forwarding the extracted control information to a selected one of the first and second data inserters depending on predetermined control information (See page 6, paragraph [0104]).

Regarding claim 20 Miyashita et al. teach a data transfer method for transferring control information from a control terminal to a target through a data transmission network including at least one data transmission equipment working in a predetermined communication protocol, comprising:

at each of said at least one data transmission equipment (Fig. 1, 60),

a) receiving a transmission signal including control information at a receiving section (Fig.1, 60a) from upstream (see page 3 paragraph [0046] and Fig.1);

b) forwarding control information included in a received transmission signal to a transmitting section (Fig. 1, 60f) without controlling the control information according to the predetermined communication protocol (It is noted that extracted control data is stored in storage, when transmitter is ready to transmit it will transmit data, see page 3 paragraph [0084]); and

c) transmitting a transmission signal including the control information from the transmitting section (Fig.1, 60f) to downstream (see page 3 paragraph [0047] and Fig.1).

Regarding claim 21, Miyashita et al. teach the data transfer method according to claim 20, wherein the step b) comprises: b.1) extracting the control information from the

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received transmission signal (see page 4, paragraph [0083], line 3); and b.2) inserting the extracted control information into a predetermined one of a first location and a second location of the transmission signal to be transmitted. (It is noted that extracted data inserted into the transmission data. See page 3 paragraph [0048] line 4).

Regarding claim 27 Miyashita et al. teach a program instructing a computer of a data transmission equipment to forward control information, wherein the data transmission equipment works in a predetermined communication protocol, comprising the steps of:

a) receiving a transmission signal including control information at a receiving section (Fig.1 60a) from upstream (see page 3 paragraph [0046]);

b) forwarding control information included in a received transmission signal to a transmitting section (Fig.1, 60f) without controlling the control information according to the predetermined communication protocol (It is noted that extracted control data is stored in storage, when transmitter is ready to transmit uses the stored control data. see page 3 paragraph [0084]); and

c) transmitting a transmission signal including the control information from the transmitting section (Fig.1, 60f) to downstream (see page 3 paragraph [0047] and Fig.1).

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3-6, 12, 15-18, 22-26, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (US Patent Publication No. 2003/0091057)

Regarding claim 3, Miyashita et al. teach the data transfer system according to claim 2 above. Miyashita et al. further teach SONET frame creation, which includes

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DCC (See page 6, paragraph [0106], page 3, paragraph [0041] and also, Fig. 5).

However, Miyashita et al. fails to teach the data transfer system, wherein the first location is data communication channel (DCC) bytes of the transmission signal and the second location is DCC transmit bytes that are previously determined in the transmission signal. However, DCC byte allocation is well known in the art. It is noted that transmission signal consists of different sections.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to designate locations for the DCC bytes in the transmission signal as known in the art in order to control the transmission signal successfully.

Regarding claim 4, Miyashita et al. discloses the claimed invention except for data extraction from the first location of the received transmission signal and data insertion into the second location. It would have been an obvious matter of design choice to extract and insert from the first location and into the second location, since applicant has not disclosed that data extraction from first location and data insertion into the second location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3, paragraph [0041], line 10. also, see Fig. 5).

Regarding claim 5, Miyashita et al. discloses the claimed invention except for data extraction from the second location and data insertion into the second location. It

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would have been an obvious matter of design choice to extract and insert from the second location and into the second location, since applicant has not disclosed that data extraction from second location and data insertion into the second location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10. Also, see Fig. 5).

Regarding claim 6, Miyashita et al. discloses the claimed invention except for data extraction from the second location and data insertion into the first location. It would have been an obvious matter of design choice to extract and insert from the second location and into the first location, since applicant has not disclosed that data extraction from second location and data insertion into the first location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10).

Regarding claim 16, Miyashita et al. discloses the claimed invention except for data extraction from first location and data insertion into the second location. It would have been an obvious matter of design choice to extract and insert from the first location and into the second location, since applicant has not disclosed that data extraction from first location and data insertion into the second location solves any stated problem or is for any particular purpose and it appears that the invention would

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perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10).

Regarding claim 17, Miyashita et al. discloses the claimed invention except for data extraction from second location and data insertion into the second location. It would have been an obvious matter of design choice to extract and insert from the second location and into the second location, since applicant has not disclosed that data extraction from second location and data insertion into the second location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10).

Regarding claim 18, Miyashita et al. discloses the claimed invention except for data extraction from second location and data insertion into the first location. It would have been an obvious matter of design choice to extract and insert from the second location and into the first location, since applicant has not disclosed that data extraction from second location and data insertion into the first location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10).

Regarding claim 23, Miyashita et al. discloses the claimed invention except for data extraction from first location and data insertion into the second location. It would have been an obvious matter of design choice to extract and insert from the first location and into the second location, since applicant has not disclosed that data extraction from first location and data insertion into the second location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10).

Regarding claim 24, Miyashita et al. discloses the claimed invention except for data extraction from second location and data insertion into the second location. It would have been an obvious matter of design choice to extract and insert from the second location and into the second location, since applicant has not disclosed that data extraction from second location and data insertion into the second location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10).

Regarding claim 25, Miyashita et al. discloses the claimed invention except for data extraction from second location and data insertion into the first location. It would have been an obvious matter of design choice to extract and insert from the second location and into the first location, since applicant has not disclosed that data extraction

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from second location and data insertion into the first location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data extraction and insertion from and into any predetermined location. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10).

Regarding claim 28, Miyashita et al. discloses the claimed invention except for data insertion of extracted control data into the predetermined first location and second locations. It would have been an obvious matter of design choice to insert the extracted control data into the predetermined first and second locations, since applicant has not disclosed that data insertion into the predetermined first and second locations solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with data insertion into predetermined locations. (Data extracted and inserted in different slots of transmission signal. see page 3 paragraph [0041] line 10 and page 3 paragraph [0048] line 4).

Regarding claim 12, Miyashita et al. teach the data transfer system according to claim 3 above. Miyashita et al. further teach SONET frame creation, which includes DCC (See page 6, paragraph [0106], page 3, paragraph [0041] and also, Fig. 5). However, Miyashita et al. fails to teach the data transfer system, wherein bytes that are not used in the transmission signal are assigned to the DCC transmit bytes. DCC byte allocation and assigning the used and unused bytes in the transmission signal are well

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known in the art (It is noted that transmission signal consists of different sections that could be used or not used sections).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign unused bytes of the transmission signal to the DCC transmit byte as known in the art in order to avoid wasting space in the transmission signal.

Regarding claims 15 and 22 Miyashita et al. teach the data transfer apparatus according to claim 14. Miyashita et al. further teach SONET frame structure, which includes DCC (See page 6, paragraph [0106], page 3, paragraph [0041] and also, Fig. 5). However, Miyashita et al. fails to teach the data transmission apparatus, wherein the first location is data communication channel (DCC) bytes of the transmission signal and the second location is DCC transmit bytes that are previously determined in the transmission signal. However, DCC byte allocation is well known in the art. It is noted that transmission signal consisted of different sections.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to designate locations for the DCC bytes in the transmission signal as known in the art in order to control the transmission signal successfully.

Regarding claim 26, Miyashita et al. teach the data transfer method according to claim 22 above. Miyashita et al. further teach SONET frame creation, which includes DCC (See page 6, paragraph [0106], page 3, paragraph [0041] and also, Fig. 5).

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However, Miyashita et al. fails to teach the data transfer system, wherein bytes that are not used in the transmission signal are assigned to the DCC transmit bytes. DCC byte allocation and assigning the used and unused bytes in the transmission signal are well known in the art (It is noted that transmission signal consists of different sections that could be used or not used sections).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign unused bytes of the transmission signal to the DCC transmit byte as known in the art in order to avoid wasting space in the transmission signal.

Regarding claim 29, Miyashita et al. teach the program according to claim 28. Miyashita et al. further teach SONET frame structure, which includes DCC (See page 6, paragraph [0106], page 3, paragraph [0041] and also, Fig. 5). However, Miyashita et al. fails to teach the data transmission apparatus, wherein the first location is data communication channel (DCC) bytes of the transmission signal and the second location is DCC transmit bytes that are previously determined in the transmission signal. However, DCC byte allocation is well known in the art. It is noted that transmission signal consisted of different sections.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to designate locations for the DCC bytes in the

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transmission signal as known in the art in order to control the transmission signal successfully.

8. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (US Patent Publication No. 2003/0091057) in view of Czeiger et al. (European Patent No. EP1206099)

Regarding claim 8, Miyashita et al. teach the data transfer system according to claim 4, except wherein an upstream data transmission equipment works in a different communication protocol and a downstream data transmission equipment works in the predetermined communication protocol. However, Czeiger et al. teach the data transfer system, wherein an upstream data transmission equipment (Fig.1, 10) works in a different communication protocol and a downstream data transmission equipment (Fig.1, 10) works in the predetermined communication protocol (See page 2 paragraph [0005]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transmission equipment of Miyashita et al. to include the downstream and the upstream connected to a transmission equipment can operate in two different protocols in order to communicate between two different protocol.

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Regarding claim 9, Miyashita et al. teach the data transfer system according to claim 5, except wherein both an upstream data transmission equipment and a downstream data transmission equipment work in the predetermined communication protocol. However, Czeiger et al. teach the data transfer system, wherein both an upstream data transmission equipment (Fig.1, 10) and a downstream data transmission equipment (Fig.1, 10) work in the predetermined communication protocol (See page 2 paragraph [0005]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transmission equipment of Miyashita et al. to include the downstream and the upstream connected to a transmission equipment can operate in two different protocols in order to communicate between two different protocol.

Regarding claim 10, Miyashita et al. teach the data transfer system according to claim 6, except wherein an upstream data transmission equipment works in the predetermined communication protocol and a downstream data transmission equipment works in a different communication protocol. However, Czeiger et al. teach the data transfer system, wherein an upstream data transmission equipment (Fig.1, 10) works in the predetermined communication protocol and a downstream data transmission equipment (Fig.1, 10) works in a different communication protocol (See page 2 paragraph [0005]).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transmission equipment of Miyashita et al. to include the downstream and the upstream connected to a transmission equipment can operate in two different protocols in order to communicate between two different protocol.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Denton (US Patent No. 6,580,731) teaches Multi-stage SONET Overhead Processing.

10. Any responses to this Office Action should be **faxed** to (571) 273-8300 or **mailed** to:

Commissioner for Patent
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nima Mahmoudzadeh whose telephone number is (571) 270-3527. The examiner can normally be reached on Monday - Friday 7:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Q. Tieu can be reached on (571) 272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nima Mahmoudzadeh

Patent Examiner
AU 2609



BENNY Q. TIEU
SPE/TRAINER